DEFENSE INFORMATION INFRASTRUCTURE (DII)

COMMON OPERATING ENVIRONMENT (COE)

DII COE Version Description Document
for
Distributed Computing Environment (DCE) Client Segment
v1.0.0.1 (HP-UX 10.20)

Version Description Document
05/05/97

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1. System Overview

A DCE Client is a system that runs an application client or an application server but does not run a DCE server (CDS server, DTS server or Security Server). DCEC client uses the DCE Remote Procedure Call (RPC) facility to provide a way of communicating between software modules running on different systems.

DCE Client (DCEC) provides a set of services also provided in the DCE Server (DCES) segment. Figure 1 shows the DCEC host services and its relationship to DCES host services.

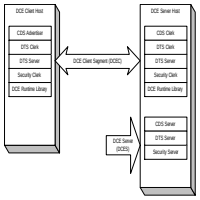

Figure 1 DCE Client Services

The DCEC segment supports the following list of services:

- DTS Clerk — As a client (clerk) process receives time values from the DTS Server and synchronizes the local clock (**dtsd daemon**).
- DTS Server
  - Global server, synchronizes with an external, trusted time reference and provides the time to the local servers in a distributed network (**dtsd daemon**).
  - Local Server, synchronize time with one or more local **dtsd** servers in the cell and adjusts the clock on the local host.
- CDS advertiser — The CDS advertiser function sends and receives advertisements of available CDS servers. It supports client applications in locating the CDS server, **cdsd**. The CDS advertiser provides the CDS Clerk functionality.
  - CDS Clerk - Its function is to provide name information to other

applications or to users. It performs other tasks, such as caching information, but only to serve its main purpose of delivering information. This functionality has been included in the CDS advertiser.

- Security Client — The security clerk's enables the client to communicate with the security server daemon (**secd**). Maintains the login context and key function for the host principal. The daemon **dced** handles this task and registers binding information and maintains the host endpoint map. Maintaining the endpoint map is often referred to as host services. **dced** provides access to the DCE control program (**dcecp**).

The table below displays the process differences between the client and the server. It shows each function and the associated daemon that is responsible for handling that service. The DCE Client is a subset of the DCE server functionality. Based on the Table 1 the HP-UX 10.20 has three DCE processes: **cdsadv**, **dtsd**, and **dced**.

Service	Client Daemons	Server Daemons
CDS Clerk	cdsadv	cdsadv
DTS Clerk	dtsd	dtsd
DTS Server	dtsd	dtsd
CDS Advertiser	cdsadv	cdsadv
Security Client	dced	dced
Security Server		secd
DTS Server		dtsd
CDS Server		cdsd

Table 1 DCE Daemons

2. Reference Documents

- *Planning and Configuring HP DCE 1.5*
- Version Description Document Defense Information Infrastructure (DII) Common Operating Environment (COE) *Distributed Computing Environment (DCE) Client Segment* Version 1.0.0.1, May 5, 1997.
- Defense Information Infrastructure (DII) Common Operating Environment (COE) *Distributed Computing Environment Client (DCEC) Segment v1.0.0.1 Installation Instructions for HP-UX 10.20*

3. Version Description

3.1 Inventory of Materials

- Magnetic Media: Two 8mm tapes consisting of relative tar of the Distributed Computing Environment (DCE) Client Segment, Version 1.0.0.1/HP-UX 10.20, May 5, 1997
- Version Description Document Defense Information Infrastructure (DII) Common Operating Environment (COE) *Distributed Computing*

Environment (DCE) Client Segment, Version 1.0.0.1, May 5, 1997
- Defense Information Infrastructure (DII) Common Operating Environment (COE) *Distributed Computing Environment Client (DCEC) Segment v1.0.0.1 Installation Instructions for HP-UX 10.20*

3.2 Software Changes

The DCEC segment, Version 1.0.0.1 differs from DCEC, Version 1.0.0.0 in only one respect.

DCEC Version 1.0.0.1 is to be used exclusively for the HP-UX 10.20 operating system, while DCE Version 1.0.0.0 was built exclusively for the HP-UX 10.10 operating system.

3.3 Test Environment

- HP/9000 715 Workstation
- HP-UX Operating System version 10.20
- DII COE Kernel version 3.0.1.0 HP-UX 10.20, material 04/14/97
- DII COE Developers Toolkit version 3.0.1.0 HP-UX, material date 04/14/97
- HP DCE 1.5 for HP-UX 10.20

3.4 Machine Requirements

The following is the minimum system requirements to run the HP DCEC segment:

- Memory is a minimum of 32MB

Swap space is a minimum of 50MB

4. Limitations of This Release

Some of the limitations described in this section reflect limitations of OSF DCE 1.1; others are limitations specific to this release.

4.1 Limitations of OSF DCE 1.1

Following are limitations of OSF DCE 1.1:

- The tool **passwd_import**, which imports user account information from **/etc/passwd** files to the Registry database, does not import the passwords themselves. Therefore, after you have used **passwd_import** to create skeletal DCE accounts in the Registry database, you must use the **dcecp** tool to add passwords to those accounts. This information is particularly important to customers who plan on using the DCE-integrated HP-UX login tools (**login**, etc.).

- Transitive trust path generation and evaluation, as described in sections 33.1.2 and 33.1.4 of the *OSF DCE Administration Guide -- Core Components* is not supported.

- Cell alias/rename is partially supported: creation of cell aliases (**dcecp cellalias create**) is supported; renaming of cells (**dcecp cellalias set**) is not supported. Disregard Sections 21.6.2 and 21.6.3 of the *OSF DCE Administration Guide -- Core Components*.

Other notes:

- Cell alias names are not automatically propagated across cell boundaries. Use of cell aliases across cell boundaries is supported when the cell alias name is manually registered in the security namespace.

- Ticket requests to alias names for the local privilege server are treated as foreign cell requests. At DCE 1.1, the privilege server removes ERAs from credentials request by foreign cells. Therefore, credentials returned by ticket requests to alias names do not include ERAs. The following scenario illustrates this limitation:

    1. Create "old_cell".
    2. Add "new_cell" as an alias for "old_cell".
    3. **dce_login** as "/.../old_cell/<user>".
    4. Request credentials to application service "/.../new_cell/<service>"

  The credentials returned for /.../new_cell/<service> will not contain ERAs. The privilege server treats the request to /.../new_cell as an intercell request from /.../old_cell to /.../new_cell, and removes any ERAs that may be attached to the principal.

4.2 HP DCE 1.5 Limitations on OSF DCE 1.1 Functionality

The following OSF DCE 1.1 functionality is not supported in HP DCE 1.5:

- DFS Extended File Services are not supported.

4.3 System Utilities Not Integrated with DCE Security

The following utilities are not integrated with DCE Security: **cron**, **at**, **rlogind**, **remshd**, **rexecd**, **lp**.

5. Installation Instructions

Reference the Distributed Computing Environment Client (DCEC) Segment v1.0.0.1 Installation Instructions for HP-UX 10.20 for instructions on installing the DCEC Segment.

To configure the DCE client, select <Network> | <Configure DCE Client> from the sysadmin pull down menu.

6. Known Problems and Errors

6.1 COEPromptPasswd

The **COEPromptPasswd** displays a window with an optional password prompt message. This command does not support a need to have a user log in as root and pass the password from the prompt to the **su** command.

7. Release Notes

7.1 General

The DCEC segment cannot be de-installed. This is because the DCE client software is part of the HP-UX 10.20 operating system. The DCEC segment merely contains encryption libraries and patches. The segment can be unconfigured.